

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 2, lines 15-27 with the following amended paragraph:

The oxidation step is a step for obtaining cumene hydroperoxide by oxidizing cumene. The oxidation of cumene is usually conducted by auto-oxidation using an oxygen-containing gas such as air or oxygen-concentrated air. This oxidation may be conducted without use of an additive, and an additive such as an alkali may be used. The reaction temperature is usually from 50 to ~~200~~200°C, and the reaction pressure is usually between atmospheric pressure and 5 MPa. In the oxidation method in which the additive is used, an alkali metal compound such as NaOH or KOH, an alkaline earth metal compound, or alkali metal carbonate such as Na₂CO₃ or NaHCO₃, ammonia, (NH₄)₂CO₃, an alkali metal ammonium carbonate or the like, is used as an alkali reagent.

Please replace the paragraph on page 3, lines 25-29 with the following amended paragraph:

The epoxidation temperature is usually from 0 to ~~200~~200°C, and preferably from 25 to ~~200~~200°C. The pressure may be a pressure sufficient to keep the reaction mixture in a liquid condition. In general, the pressure is advantageously from 100 to 10,000 kPa.

Please replace the paragraph on page 5, lines 2-15 with the following amended paragraph:

The dehydration is usually conducted by contacting cumyl alcohol with the catalyst, but, in the present invention, hydrogen may be fed together with cumyl alcohol to the catalyst to

conduct hydrogenation subsequent to the dehydration. The reaction can be conducted in a liquid phase using a solvent. The solvent should be substantially inert to reactants and products. The solvent may be a substance present in a cumyl alcohol solution to be used. For example, when cumyl alcohol is a mixture with cumene as a product, it is possible to use cumene as a substitute without adding a solvent in particular. The dehydration temperature is usually 50 to ~~450~~450°C, preferably 150 to ~~300~~300°C. In usual, the pressure is advantageously 10 to 10,000 kPa. The dehydration can be advantageously conducted by using a catalyst in a slurry form or fixed-bed form.

Please replace the paragraph on page 6, lines 13-27 with the following amended paragraph:

As a molar ratio of hydrogen to α -methylstyrene, the range of 1 to 10 is usually applied because the reaction proceeds rapidly with increase of a partial pressure of hydrogen. The range is further preferably 1 to 5. The excess amount of hydrogen remained after the reaction can be recycled after separated from the reaction mixture. The hydrogenation can be conducted in a liquid phase using a solvent or gas phase. The solvent must be substantially inert to the reactants and products. The solvent may be a substance existing in an α -methylstyrene solution to be used. For example, when α -methylstyrene is a mixture with cumene as a product, it is possible to use cumene as a substitute of the solvent without adding a solvent in particular. The hydrogenation temperature is usually 0 to ~~500~~500°C, preferably 30 to ~~400~~400°C. In usual, the pressure is advantageously 100 to 10,000 kPa.

Please replace the paragraph on page 7, lines 14-26 with the following amended paragraph:

The reaction temperature and pressure are selected so that water contained in an α -methylstyrene solution after the dehydration, is not condensed. The reaction temperature is preferably 150 to 300 $^{\circ}\text{C}$, and the reaction pressure is preferably 100 to 2000 kPa. When the temperature is too low or the pressure is too high, water may be condensed at the outlet of the dehydration, leading to deterioration of the performance of the hydrogenation catalyst. Further, when the pressure is too high, it is also disadvantageous in the reaction equilibrium of dehydration. When the temperature is too high or the pressure is too low, it may become disadvantageous because the catalyst life is shortened by howling or the like caused by much generation of the gas phase part.

Please amend the paragraph bridging pages 9 and 10 with the following amended paragraph:

Though the amount of hydrogen required in the hydrolysis may be equimolar to cumyl alcohol, an excess amount of hydrogen is required because other components which consume hydrogen, are contained in the raw material. Further, the molar ratio of hydrogen to cumyl alcohol is usually from 1 to 10 because the reaction proceeds rapidly with increase of a partial pressure of hydrogen. The ratio is further preferably from 1 to 5. The excess amount of hydrogen remained after the reaction may be recycled after separated from the reaction mixture. The hydrogenolysis temperature is usually 0 to 500 $^{\circ}\text{C}$, preferably 30 to 400 $^{\circ}\text{C}$. In usual, the pressure is advantageously 100 to 10,000 kPa. The hydrolysis can be advantageously carried out using a catalyst in the form of slurry or a fixed bed.

Please amend the paragraph bridging pages 10 and 11 with the following amended paragraph:

When the concentration of 1,2-epoxy-2-phenylpropane contained in the ~~oxidation~~ reaction mixture after the oxidation step is over 1% by weight, a reaction yield in the oxidation step deteriorates because amounts of cumyl alcohol and acetophenone formed increase. Though cumyl alcohol can be returned to cumene via the hydrogenation step, it is not preferred economically as a process of propylene oxide production because hydrogen of equimolar to cumyl alcohol, is consumed. In addition, acetophenone is a compound in which the carbon number was reduced, therefore, it converts into ethylbenzene via the conversion step, leading to a loss of cumene.

Please replace the paragraph on page 11, lines 15-19 with the following amended paragraph:

Cumene recycled from a hydrogenation step was mixed with an aqueous solution of 1.5 wt.% of sodium carbonate in a weight ratio of 1 of the aqueous solution to 20 of cumene, and the mixture was reacted under a pressure of 630 kPa and a temperature of 90 to ~~105~~105°C for 5 hours supplying air.

Please replace the paragraph bridging pages 11 and 12 with the following amended paragraph:

A reaction operation was carried out in the same manner as in Example 1 except that the ~~lot amount~~ of cumene recycled from the hydrogenation step, was changed.

Please replace the paragraph on page 13, lines 12-14 with the following amended paragraph:

A reaction operation was carried out in the same manner as in Example 1 except that the letamount of cumene recycled from the hydrogenation step, was changed.